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LITHOGRAPHIC ABSTRACTS, NOVEMBER 1961

PHOTOGRAPHY, TONE & COLOR CORRECTION

655.302

THE PATRA-I.G.T. CONTACT SCREEN FOR OFFSET-LITHOGRAPHY. V. G. W. Harrison. Lithography in 1960 - Proceedings of the PATRA Offset-Litho Conference, Harrogate, England, February 1960, pp. 81-102 (22 pages). Deficiencies of illustrations printed with the aid of existing screening methods are described as are the requirements for a screen for ideal reproduction. A screen to meet these requirements is being developed jointly by PATRA and I.G.T. This screen does not require any modification of negative or platemaking techniques. Only one exposure is required. Its use is described. 2 references, 11 illustrations.

655.302

AN ANALYSIS OF THE OPTICS OF THE CROSSLINE SCREEN. D. J. Howe, R. E. Maurer and J. A. C. Yule. TAGA Proceedings 13, June 1961, pp. 17-30 (14 pages). Three analytical methods are described for the determination of the design of the aperture required in an optical system which uses a crossline screen to make contact screens with specified tone-reproduction characteristics. The zone method is based upon the theory that the aperture may be subdivided into elements or zones whose shapes are determined empirically to give the desired dot shapes, and that the effect of the whole aperture may be calculated from the effects of the individual zones. In the Fourier-analysis method, advantage is taken of the periodic nature of the image. The elements in this case are regarded as two-dimensional harmonic waves whose contributions may be determined individually and the aperture calculated as a weighted sum of these waves. In the matrix method, the elements in the aperture are treated as if they were point sources and the elements in the images are the resulting diffraction pattern of a point source behind the screen. 2 references, 15 illustrations.

655.302

AN EMPIRICAL DETERMINATION OF HALFTONE COLOR-REPRODUCTION REQUIREMENTS. F. R. Clapper. TAGA Proceedings 13, June 1961, pp. 31-41 (11 pages). A strictly empirical approach to halftone color reproduction has led to a set of equations relating colorimetric values to amounts of ink colorants. Red, green and blue colorimetric density readings of the original, substituted in the equations, yield percent dot sizes of the printers required for the correct reproduction of hue, saturation and brightness. A black printer is also calculated which permits four-color reproduction using optimum amounts of the colored inks. The equations are in a suitable form to serve as the basis for the electronic computing phase of an optical scanner. Such a computing system might well solve many of the problems of the present system. 7 references, 3 illustrations, 3 tables.

770.22

EXPOSURE AND DEVELOPMENT DETERMINATION FOR THE CONTINUOUS-TONE FILMS AND PLATES. TAGA Proceedings 13, June 1961, pp. 43-52 (10 pages). Gamma has been used in the past as an indication of the contrast of photographic materials, but it has not proved very satisfactory. An average-gradient measurement, known as "contrast index," is proposed in its place. The relationship of the contrast index to density range is discussed. For the purpose of estimating the adjustment in exposure and development time required when a negative has to be made over, the use of exposure-development charts is proposed. These charts allow for the effect of reciprocity failure and for the change in speed which occurs when development time is changed. An alignment chart is given for calculating the exposure resulting from various light sources, lamp distances, exposure times and original densities. 8 charts and diagrams.

535.6

COLOR-ORDER SYSTEM PREDICTING CONSTANT HUE. F. W. Billmeyer, Jr., J. K. Beasley, and J. A. Sheldon. Journal of the Optical Society of America 51, No. 6, June 1961, pp. 656-666 (11 pages). An Adjusted-hue color order system was devised by combining the hue and chroma functions of Moon and Spencer's W space, the Munsell value function and the hue spacing recommended at Munsell 6/6 by the OSA Committee on Uniform Color Scales. Adjusted-hue coordinates are related to the CIE tristimulus values by equations which are conveniently solved on a digital computer. The hue coordinate Ω-H of the Adjusted-hue system correlates well with Munsell hue for colors within the gamut of the original Munsell Book. In the Munsell-renotation extrapolation region, however, lines in CIE space of constant Ω-H and constant Munsell-renotation hue are significantly different functions of value and chroma. Experiments with high-chroma transparent specimens in an acrylic resin suggest that Ω-H is a better approximation to visually perceived hue than is Munsell-renotation hue in regions where the two disagree. As expected, adoption of the Committee hue spacing results leads to better correlation of visual estimates of hue difference with differences in Ω-H than with differences in Munsell-renotation hue. However, a still more drastic readjustment of the Munsell hue spacing might further improve the correlation.

771.318

THE PHOTOGRAPHIC ENLARGER AS A TOOL FOR COLOR SEPARATION. Mel Mark. ODR Reproductions Review 11, No. 6, June 1961, pp. 16, 18 (2 pages). An enlarger can support the camera by doing some of its work. Transparency production can be done with it. Other work is mentioned. The requirements of an enlarger for such work are given.

655.332

CONTACT SCREENS FOR PHOTOGRAVURE: THE KODAK MAGENTA SCREEN. Eric Chambers. Print in Britain 9, No. 3, July 1961, pp. 82-84 (3 pages). Invert or intaglio halftone is not a new process, going back to work by Fox Talbot in 1852. Previous halftone gravure processes are described briefly. The new kodak magenta contact screen is designed for making intermediate halftone negatives for the hard-dot process for both publication and packaging gravure. It will be most used in color work. It is available in 120, 133 and 150 lines per inch. Its use is described with data on densities and exposures given. Author believes that this screen will improve halftone gravure by simplifying etching and making duplication of results easier. 4 illustrations.

771.448

ELECTRONIC FLASH. J. Scales-Manners. British Printer 74, No. 6, June, 1961, pp. 85, 87 (2 pages). Electronic flash has long been the accepted light source for the making of separation negatives on the Continent (Europe). Method of operation is described. It has an advantage for long range copy with a high end density giving the effect of a longer straight line portion of the characteristic curve. Other advantages are given.

655.303 : 655.323

PROCESS COLOR STRIPPING. Elizabeth Parker. National Lithographer 68, No.6, June 196 pp. 42-43, 48 (3 pages). Process color is described and a few hints given on dot etching. In stripping, plastic base film must be used because of need for dimensional stability to maintain register. Suggestions are given on handling this material. The procedure in stripping to maintain register is given in some detail. 4 illustrations.

535.6

THE C.I.E. SYSTEM OF COLOR MEASUREMENT. Paul J. Secrest. Official Digest, Vol. 33, No. 436, May 1961, pp. 583-596, (14 pages). Fundamental principles of trichromatic colorimetry are explained and establishment of C.I.E. system of color measurement is discussed. C.I.E. primaries, luminance factor, chromaticity, dominant wavelength and purity are explained and defined.

655.302

NEW SCANNING EQUIPMENT NOW ON TEST. Eric Chambers. The Process Journal No. 36, Summer Issue 1961, pp. 5, 7, 9 (3 pages). The new equipment discussed carries the names: Belin, LogEtron and Miehle-Goss-Dexter. The Belin scanner from France was originally developed for textile work. It will scan reflection or transparency copy. Its operation is described briefly. The LogEtronic scanner is a development of the LogEtronic monochrome photographic printer. The scanner is claimed to carry out electronic masking with great precision and reliability. Some details are given. The Miehle-Goss-Dexter scanner is the result of extensive development work, is designed to use more than three bands of the color spectrum and to be fully automatic. It scans transparency or reflective copy, gives continuous tone or screened positives or negatives. High color fidelity is claimed.

PLANOGRAPHIC PRINTING PROCESSES

655.324

BROADENING APPLICATION OF PRESENSITIZED PLATES. Stanley Potter. British Printer 74, No. 7, July 1961, pp. 146, 148 (2 pages). Author reports on recent trends in litho plates, with thin, grainless or lightly grained presensitized plates said to represent 80% of plate usage in the U. S. today. British and European practice calls for thicker plates with more grain. A presensitized plate of these characteristics has been developed.

655.307

A REGISTRATION SYSTEM FOR SMALL OFFSET PLATEMAKING. Anon. The Small Offset User 10, No. 117, July 1961, pp. 405, 407, 409 (3 pages). Presents a punch and pin register system for small offset presses such as the Multilith and Rotaprint machines is given in some detail. 4 illustrations.

655.325

HOW SACRAMENTO LETTER SHOP PRODUCES 10,000 PLATES A MONTH. Ray R. Caldwell. ODR Reproductions Review 11, No. 6, June 1961, pp. 12-13 (2 pages). Description of a systematized set-up based on the Kodak Ektalith process. Platemaking time was cut from 4 minutes to less than 2 minutes. 2 illustrations.

655.325

PLATEMAKING PROCEDURES FOR LITHOGRAPHY. R. J. Burnett. British Printer 74, No.6, June 1961, pp. 130, 32, 34 (3 pages). A "refresher course" survey giving simplified explanations of plate coating, exposure and other operations of platemaking. Albumin and deep-etch methods are covered. 3 illustrations.

655.324 : 655.83

PRESENSITIZED PLATES PEP PRODUCTION. Neal D. Rader. National Lithographer 68, No. 6, June 1961, pp. 69-70, 72 (3 pp.) Story on how J. L. Clark Mfg. Co., Rockford, Ill. uses presensitized plates in metal decorating printing. Improved quality resulted. Other advantages are given. 5 illustrations.

655.326

HOW TO STORE PLATES. John J. Jayne. National Lithographer 68, No. 6, June 1961, pp. 36-37, 48 (3 pages). Plate storage has its advantages when it comes to reruns. A system is offered in three elements: 1. preparing plate for storage; 2. method of storage; 3. control file. Preparation includes cleaning, asphaltum and flattening. Methods of hanging are illustrated. Control file comes in next installment. 4 illus.

655.325

ROBERTSON ELECTRICON DEVICE PRODUCES PAPER OFFSET PLATES IN 60 SECONDS. Anon. The Inland and American Printer and Lithographer 147, No. 3, June 1961, p. 82 (1 page). Brief description of a device using a dry, electrostatic process to turn out paper offset masters suitable for short runs of 15 to 300 copies on an offset duplicator. 1 illustration.

PAPER AND INK

655.306

A NEW THEORY OF INK/PAPER RELATIONSHIPS. A. D. McInnes. Part I - The Australasian Printer, Vol. 12, No. 8, August 1961, pp. 37,39,41,43,44. Part II - IBID, Vol. 12, No. 9, September 1961, pp. 37,39,40 (8 pages in all). Author first discusses ink absorption, ink drying, paper surface absorption, paper gloss and tests attempting to correlate these as performed by LTF and PATRA. He points out the difference between tests with a simple oil and printing with inks having both high and low viscosity components. A test is described which produces a graph of "%Film" against time. As a result of these tests, author postulates a four point theory of absorption and discusses their relationship to several types of inks. In part II, autnor discusses results in terms of parameters he calls Initial Oil Resistance, Saturation Effect and Absorption Differential and their relation to absorption setting, drying, gloss and scuff resistance. 2 graphs.

655.306 : 676.27

THE SURFACE STRUCTURE OF PAPER - Part I. R. R. Coupe. Print in Britain 9, No. 2, June 1961, pp. 36-38 (3 pages). While halftones can be printed offset on rougher paper than letterpress, for highest quality, a smooth paper is required for either process. Many printability characteristics of paper are linked to smoothness. The surface characteristics of uncoated and coated papers are explained and illustrated with diagrams. Photomicrographs illustrate poor surface fiber structure and froth markings. A table illustrates the relationship between smoothness and compressability. 3 illustrations, 2 tables.

676.235

MILL DATA SHOW ADVANTAGES OF IMPROVED COATING LATEX. J. E. Donalds. Paper Trade Journal 145, No. 29, July 17, 1961, p. 37 (1 page). Better binding efficiency of a Dow developed styrene-butadiene latex (Latex 630) has permitted reductions of total adhesive by as much as 10-15% without loss of pick resistance. 1 table.

676.2

CRANE SPEEDS SORTING OPERATION WITH VOID DETECTOR. Philip H. Murphy. Paper Trade Journal 145, No. 30, July 24, 1961, pp. 32-33 (2 pages). After a simple roll and brush electrical contact unit failed to detect small enough holes, an electronic detector was installed between the unwind stand and the flyknife of the sheeter. It could be set to indicate a defective sheet for immediate removal (if they did not come too fast) or to flag the sheet for later removal (if they came too fast). Operation is described with the aid of 5 illustrations.

655.306 :676.27

A NEW APPROACH TO THE MEASUREMENT OF ROUGHNESS AND POROSITY OF PAPER. A. J. W. Sweerman. TAPPI 44, No. 7, July 1961, pp. 172A-174A (3 pages). Because the mathematical treatment of the nipspreading of a liquid drop over a paper is very difficult, another apparatus has been designed to bring liquid onto the paper. From the results obtained with this new method two quantities can be calculated which correspond to the roughness and porosity of the paper. 5 references, 8 illustrations, 1 table.

655.306

PROBLEMS IN THE USE OF PRINTING INKS - PART V - LIGHT FASTNESS. Anon. The Australasian Printer. 12, No. 6, June 1961, p. 29 (1 page). The effect of light on a color is usually fading, but darkening can occur; and pigments can vary widely in light fastness. Generally light fast colors are more expensive; popular brilliant colors have low light fastness. The importance of light fastness varies with the use. The use of extenders lowers light fastness. Few pigments are light fast enough to use in tints. Mixing colors of differing light fastness can lead to trouble.

676.27 : 655.306

FLUORESCENT PAPERS. William H. Bureau. The Graphic Arts Monthly 33, No. 6, June 1961. pp. 42, 44, 114 (3 pages). Shades of "White" vary from cream to blue white. Few, if any, papers are a true or neutral white. Brightness is defined in terms of magnesium oxide as 100%. Fluorescent papers have become common in efforts to give brighter papers. The fluorescence adds to brightness by converting ultraviolet to visible light and adding it to the reflection from the paper. When this added reflection is bluish, color printing is affected. The LTF studies on this are mentioned.

655.326

RECENT CONTRIBUTIONS OF INKMAKING TECHNOLOGY TO OFFSET-LITHO PROGRESS. Peter Lister. British Printer 74, No. 7, July 1961, pp. 154,56,58 (3 pages). Author first traces growth of quality printing by offset through improvements in papers and in techniques of printing them. Stronger colors, gloss and rub resistance have been demanded in the packaging industry. Some elements of ink formulation are discussed briefly and it is pointed out that numerous compromises must be made. Cooperation between all sectors of the industry is necessary for advancement.

655.336

SMOOTHNESS AND HARDNESS IN GRAVURE PAPERS AND THEIR PRINTABILITY. W. Huemmelchen. Print in Britain 9, No. 3, July 1961, pp. 84-85 (2 pages). The effect of lack of smoothness on printed results is explained. The moisture content of the paper can affect the smoothing of the paper in the calendering process. Hard papers are less absorbent than soft, but this is of little importance in gravure. The effect of filler and sizing on printability is discussed. Coating improves the appearance of paper, but not its printing performance in gravure. This and other aspects of coated paper printing by gravure are discussed.

676.27

THE EFFECT OF RELATIVE HUMIDITY AND TEMPERATURE ON PAPER PROPERTIES. W. A. Wink. TAPPI 44, No. 6, June 1961, pp. 171-180A (10 pages). An examination into factors that can contribute to the variability in test results obtained when testing is done in an atmosphere controlled in accord with TAPPI Standards. Suggestions are made, such as tightening of tolerances. 17 references, 2 charts, 7 tables.

655.08 : 655.306

PRINTING INK-PAPER RELATIONSHIPS XI - COMPARISON OF INK TRANSFER MEASUREMENTS ON FOUR LABORATORY PRINT MAKERS. Jacqueline M. Fetsko. National Printing Ink Research Institute, Lehigh University, Project Report No. 47, May 1961, 23 pages. The purpose of this work was to study the effect of press geometry on the transfer of ink to paper. The testers used were the FAG Proof Press (similar to the Vandercook No. 4) and the FOGRA, IGT, and Leipzig Printability Testers. These print makers differ not only in geometry, but also in the type of packing normally employed. The geometry and packing of the print maker influence percent transfer of ink to paper, the mechanisms whereby the transfer is accomplished, and the sensitivity of transfer to variations in pressure and speed. A broad relationship exists between paper roughness, surface absorption, and ink splitting. Within a system, these factors are

separate entities. Low film thickness transfer parameters, such as the position of the peak, are good measures of paper roughness. The height of the peak is related to a combination of factors, of which surface absorption is not the most important. 14 references, 8 diagrams or curves, 7 tables.

655.326

LITHOGRAPHERS SAVE TIME, MONEY, SPACE WITH BASIC INK SYSTEMS. Anon. Modern Lithography 29, No. 6, June 1961, pp. 31-32, 149 (3 pages). Report of a study of his ink usage habits by a Philadelphia lithographer which led to a systematized plan of ink purchases and use. Pre-packaged basic ink ingredients were stocked. When a problem job came along, ink supplier analyzed the job, gave printer a formula he could fill from stock on hand. The system gave lower ink costs, better press utilization and complete control by the printer. 3 illustrations.

655.326

AN APPROACH TO INK FORMULATION. E. A. Apps. The Litho-Printer 4, No. 6, June 1961, pp. 363,67,71,75 (4 pages). Linseed oil has been the standby of lithographic ink formulation for many years. Recently its limitations have become evident in comparison with newer vehicles. Synthetic vehicles overcome some of these limitations but have handicaps of their own. Lithographic inks are discussed from the standpoint of requirements, properties and tests. Formulations are discussed for different color strengths, chemical resistance, odor, etc.

616.5

PRINTING INKS AND PRINTERS' SKINS. Anon. Printing World 168, No. 13, March 29, 1961, p. 348 (1 page). Some of the hazards of the printer are discussed. Lead poisoning is more likely to occur to compositors in a small shop than to a linotype operator, for instance. In a few cases, inks and cleaning solutions can cause trouble. Bichromates cause skin irritation in lithographic platemaking. Acid burns are not as common as would be expected.

LITHOGRAPHY - GENERAL

655.7 : 655.302

COLOR FOR PAPERBACKS. David Safran. Book Production, June 1961, p. 61 (1 page). A next step in upgrading paperbacks could be run-of-book full color illustrations. New scanning processes for separation and correction, web offset and other high speed equipment bring extra costs for color to low values. Figures on estimated costs, and a prediction of a rapid increase in the use of color are given.

655.07 : 655.32

TRAINING - AN URGENT NEED OF TODAY'S LITHOGRAPHY. Charles W. Latham. The Inland and American Printer and Lithographer 147, No. 3, June 1961, pp. 58-59, 130 (3 pages). Older methods of training take too long for today's operations. Among methods of accelerating training, magazine articles and books are mentioned, as well as self-teaching kits from LTF. Other methods include factory training on new presses. PIA material for executives and junior executives and LTF Seminars. 5 illustrations of LTF Literature and Seminars.

655.329

STANDARDIZATION WEB OFFSET'S KEY. Anon. New England Printer & Lithographer 24, No. 7 July 1961, p. 41 (1 page). Report on a survey of production of books by web-offset. Some highlights of the report are given covering: paper, waste, binding, downtime, length of runs, advantages and disadvantages of standardization. Future strength of web offset book production lies in school workbooks, parts books, trade books and text books.

655.329

FAST WEBMASTER OFFSET FROM EAST GERMANY. Anon. Printing World 168, No. 25, June 21, 1961, p. 689 (1 page). Brief story on a press developed in Leipzig. The RZO 11 incorporates improvements resulting from 7 years of development. Offered in 1 to 6 color version, format is 44X62 c.m. (17.3 x 24.4 in.). Delivery is rewind, sheet or fold. Speed is 8,000 i.p.h. per unit. 1 illustration.

655.329

USING WEB PROFITABLY. Jack Hodes. Book Production, June 1961, p. 62 (1 page) It is important for the book designer and the production manager to know what can be done by web offset in book printing. Some pointers are given on reprinting, imposition, short-run, spoilage, and papers which can be used.

655.7

PRINTING CLOTH COVERS. Anon. Book Production, June 1961, p. 63 (1 page). Offset printed cloth book covers have increased recently. The advantages of offset lies in its ability to print 2 and 4 color halftones. Much special development work was necessary to produce a durable cover for textbook use.

655.7 : 655.329

A CLOSER EXAMINATION OF OFFSET PRINTED NEWSPAPERS - First of a Series 1. OFFSET PRINTED NEWSPAPERS. Herbert Phillips. Printing Production 91, No. 9, June 1961, pp. 55-57, 130 (4 pages). The number of weekly and daily newspapers being printed by offset is steadily growing. Figures on this are given. Paper manufacturers are considering improved paper for web offset newspapers. Publication printers have led the way into web offset. The relationship of color, and gravure to newspaper printing are discussed.

655.7 : 655.329

BOLD MOVE: FROM LETTERPRESS TO WEB OFFSET. Robert Schneider. Printing Production 91. No. 9, June 1961, pp. 62-63, 84, 86 (4 pages). Story on how Ohio's largest Negro newspaper, The Cleveland Call-Post took on cold typesetting and the new printing process. The process is described throughout. Justowrites and VeriTyper composition, paste-ups, wipe-on plates and a Goss Suburban press are used. 4 illustrations.

655.329

LITHO-MASTER - THE LATEST ALLER WEB OFFSET DEVELOPMENT. Anon. The Litho-Printer 4, No. 6, June 1961, pp. 341,43,45 (3 pages). The litho-master is a web offset perfecting unit-type press with complete flexibility of expansion embodied in its design. The press can be arranged with a maximum of Eight Units operating with one Folder. In the U.S. this machine will be sold by R. Hoe & Co. Full specifications and details are given. 2 illustrations.

655.326

CHOICE OF PAPER FOR OFFSET-LITHO. Frank Grunfeld. British Printer 74, No. 7, July 1961, pp. 148,50,52 (3 pages). Continuous improvement of presses, plates, blankets and inks have greatly increased the ability of the process to produce acceptable work from a wide range of papers. For optimum results certain basic characteristics still govern. These are listed and discussed under the following headings: (1) Flatness and proper relative humidity; (2) Grain direction and squareness; (3) Resistance to picking and absence of fluff; (4) Absence of chemical reaction. Some tips on paper handling are given. Reference is made to LTF Technical Bulletin No. 308 on this subject.

655.329

REFLECTIONS ON WEB-OFFSET PROSPECTS. George Wood. British Printer 74, No. 7, July 1961 p. 83 (1 page). Author "reflects" on the subject: Web-Offset is "the most talked about subject in the graphic arts industry today". He also reports that at a Web-Offset Conference

in Chicago, information and practical experiences were freely placed at the disposal of the audience who were free to ask what they would. It was pointed out that some of the original ideas on press design originated in Europe, were developed in the U. S.

655.329

WEB-FED OFFSET DEVELOPMENTS IN PERSPECTIVE. Anon. British Printer 74, No. 7, July 1961, pp. 94-96 (3 pages). Within the past few years there has been a spectacular advance in the extent and scope of web-offset printing in the U. S. It is anticipated that a rapid advance in web-offset in Europe will draw its work almost equally from letterpress and from gravure. Progress is first expected in the local newspaper field. Growth in number of presses in the U. S. is now reported to be from 18 to over 200 in ten years. Some advantages are cited and some installations in England listed. 2 illustrations.

GRAPHIC ARTS - GENERAL

655.314

WHAT'S WITH WRAP-AROUND? Anon. New England Printer & Lithographer 24, No. 6, June 1961, pp. 56-57 (2 pages). The current situation in wrap-around is discussed. Had it been offered ten years ago, it would have been more in demand than it is today. The reason is the recent growth in offset. Wrap-around has some limitations, as in paper, quality, high cost of plates, etc. Advantages are in ability to hold color, adaptability to packaging, etc. A table compares Harris and Heidelberg presses for wrap-around plates. 2 illustrations.

617.759

THE COLOR-BLIND PRINTER - A SIMPLE TEST CAN IDENTIFY HIM. Israel Dvorine, O. D. Graphic Arts Monthly 33, No. 6, June 1961, pp. 28-30 (3 pages). Of 8,000,000 color-blind men in this country many are working at printing presses and are unaware of their color vision defects. The color-blind can learn to identify colors by brightness rather than hue, but this is frequently inaccurate. Different degrees of color-blindness are explained and tests are described which detect the defect. 2 illustrations.

655.307 : 655.302

NOISE KILLED, FLOORS SAVED. Anon. Graphic Arts Monthly 33, No. 6, June 1961, pp. 40-1 (2 pages). Brief story on a new publishing house plant (Standard Rate and Data Service, Skokie, Illinois). Both sheet and web fed presses are mounted on a concrete floor without bolts by using unisorb mountings which absorb up to 85% of machine vibration. Noise reduction is important as all departments are in the one building. 2 illustrations.

655.312

POWDERLESS ETCHING OF COPPER. Paul F. Borth and Marvin C. Rogers. TAGA Proceedings 13, June 1961, pp. 1-8 (8 pages). A process for the powderless etching of copper plates for photoengraving has been developed, based on the formation of a protective film on the metal surface by reaction between copper ions and an organic additive to the ferric chloride etchant. Two additive materials, GT-1 and PERI 13a are available for use by members of Photo-Engravers Research, Inc. Careful control of bath composition, bath temperature and machine speed is needed. Powderless etched plates have proved superior to plates prepared conventionally in efficiency of plate production, in subsurface structure, and in tone reproduction. 10 references, 5 illustrations.

655.329 : 655.7

ENCYCLOPEDIAS BY WEB OFFSET. Gerard G. Mayer. Book Production, July 1961, pp. 32-33 (2 pages). Teletypesetting and Brightype combine with web offset in the production of the 15 volume McGraw-Hill Encyclopedia of Science and Technology. Color illustrations were run sheet fed offset. Other details of composition, printing and binding are given. 2 illustrations.

655.312

THE POSITIVE RESIST PROCESS FOR ROTARY LETTERPRESS WRAP-AROUND PLATES AND SEGMENTS. Eric Chambers. Print in Britain 9, No. 2, June 1961, pp. 40-41 (2 pages). Process described is an effort to give letterpress photoengraving of one-piece plates the benefit of lithographic experience. Registration of separate portions of a form is done in the film positive stage. Entire process when used with powderless etching is described. 1 illustration.

655.82

MAGNETIC PRINTING. Anon. American Ink Maker 39, No. 7, July 1961, pp. 31,56,57 (3 pag Magnetic ink printing is growing: P.I.A. has made a survey on its status. L.T.F. is conducting seminars, etc. Banks are insisting on compliance with tolerance standards: today rejections are 1 to 2% of checks delivered by printers, should be down to 0.1% in 5 years. Printers are charging 10 to 15% more for magnetic encoded checks, which has met resistance from bankers. At present only about 200 of the 14,000 banks are using MICR. Other uses are in the offing: insurance, air line accounting, give-away coupons, retail credit accounts, tax records, etc.

655.388

SHEET-FED PHOTOGRAVURE MACHINES. Dr. H. B. Bolza-Schuenemann. Print in Britain 9, No. 3, July 1961, pp. 90-92 (3 pages). Opinions vary on sheet-fed gravure: On the way out, or reviving with the help of new presses. Work done is listed as: 1. Long runs of high quality advertising brochures; 2. Carton covers; 3. Highest quality work such as books of art, post cards, calenders, etc. Users of rotogravure are buying sheet-fed presses for certain of their work better done sheet-fed than roto. Some points on press operation and selection are discussed and some data given on Koenig & Bauer presses. 1 illustration.

655.306 : 655.02

THOUGHTS ON FACTORY PLANNING WITH SPECIAL REFERENCE TO PAPER STORAGE. Ian Scott. Print in Britain 9, No. 3, July 1961, pp. 93-95 (3 pages). Author traces development of plant planning from the shop-below-the-living-quarters stage to the current single-floor, flow-plan era. He suggests that it is time to consider storage above the pressroom floor with stock lowered to the presses. He offers two sketches of a plant in which paper is taken up a ramp to an upper level in the truck delivering it, whence it is lowered to the presses.

655.315

NEW PLATES PROGRESS REPORTS. Panel. The Electrotypers & Stereotypers Magazine 47, No. 6, June 1961, pp. 12, 14, 16, 18, 20, 22, 24, 26, 28-30, 32, 34, 35 (14 pages). A panel report on newer forms of duplicate plates. James P. Terry reported on the Bista plate, a plastic backed electrotype. It requires no hand finishing, gives more faithful reproduction of the engraving, but has some problems in routing. Norman Tompkins reported on the Daxene plate, which is a plastic duplicate plate flexible enough for wrap-around, less expensive than an electrotype, gives finer detail than rubber and runs 300,000 to 500,000 impressions. Hugh B. Gage reported on Dycril as a pattern plate. Hints are given on molding procedures. A. Emerson Cheney describes another plastic backed plate. With no heat applied in backing, registration and detail are not impaired. John DeMaria reported on the Chem-O-Type, a flexible plastic plate with a 3 layer construction with tough wearing surface, a dimension control layer and a resilient layer. The making of the plate is described.

655.7

LETTERPRESS OR OFFSET . . . WHICH IS BETTER FOR MAGAZINE PRINTING? E. B. Hundley. The American Pressman 71, No. 6, June 1961, p. 28 (1 page). Some factors in a decision would include: Number of copies, quantity of illustrations, art format, relationship of editorial matter to advertising. Lists are given of advantages of the two printing processes in magazine printing. Arriving at an answer can be difficult.

655.31

WHERE DOES LETTERPRESS STAND TODAY? WHAT'S ITS FUTURE? Alan S. Holliday. The Inland and American Printer and Lithographer 147, No. 3, June 1961, pp. 45-47 (3 pages). Letterpress is still very lively and healthy and growing. There is need to overcome stubbornness, inertia, negative thinking and indifference to keep it that way. Research is important. Some products of research mentioned are: Cameras are playing an increasingly important role; automatic typesetting, and faster line-casting machines; Dycril photopolymer plates available in five forms. To be continued. 3 illustrations.

655.312

POWDERLESS ETCHING. George Rothermel. The Electrotypers & Stereotypers Magazine 47, No. 6, June 1961, pp. 42-44 (3 pages). Powderless etching is now a proven, reliable process with wide acceptance which makes fine originals for duplicate plates. Most problems encountered have been due to something outside the chemistry of the process. Speed of reproducing etchings makes possible multiple originals rather than duplicates. Magnesium, zinc and copper are now powderless etched. Interest in the wrap-around plate is growing.

655.28

PUNCHED CARD AND TAPE METHODS FOR CUMULATIVE LISTS. F. W. Simmonds. British Printer 74 No. 6, June 1961, pp. 110-112 (3 pages). Directories, parts lists and similar involving revisions and reprinting have been a composition problem. Since British printers appear to be tied to their investment in hot metal composition equipment electric typewriters and card index approaches do not appeal. The use of Teletypesetter tape with an extra channel, tied in with punched cards appears to offer possibilities. 3 illustrations.

655.305

STATIC STRIKES MORE THAN TWICE. Donald J. Doyle. Printing Production 91, No. 9. June 1961, pp. 64-65, 94, 124, 126-127 (6 pages). Some troubles due to static in paper handling in printing are listed. The triboelectric series has paper about the middle in a variable position making the control of static on paper more difficult. A table lists places on a press and paper operations involved in static. Author gives a list of methods for controlling static with a brief discussion of each. 4 illustrations.

655.02

CLEAN, CORRECT CLOTHES = SAFETY. Joseph B. Kirshbaum. National Lithographer 68, No. 6, June 1961, pp. 51, 54 (2 pages). Chemical fumes can impregnate clothing and cause irritation. Uniforms in a lithographic plant are beccming common. Cleanliness, appearance and safety has caused this trend. Safety is involved through: 1. Falls; 2. Burns; 3. Getting caught in moving machinery; 4. Skin rashes and dermatitis. Examples on these points are given. 3 illustrations.

655.312

DYCRIL - THE DU PONT PHOTOPOLYMER PLATE. James R. Whitney. The Inland and American Printer and Lithographer 147, No. 3, June 1961, pp. 50-51, 90 (3 pages). This original letterpress plate is so new that there is still a variety of opinions about its worth. What it is, how it is prepared and something of what it will do are explained. Its press life is comparable to that of a nickel faced electrotype. A report on a questionnaire survey indicates a wide variety of experiences with the plate. Some inks give trouble with the plate, either chemically or in abrasion. 8 illustrations.

Add to PAPER AND INK Section:

*PRINTING INKS. Miehle-Goss Dexter Inc. Brit. Pat. 861,404; Brit. Pat. Abstr., 22 Feb. 1961, p. 13. Printing Abstracts, Vol. 16, No. 6, June 1961, page 296. Non-aqueous quick-dryi vehicle comprising binder (drying oil type) having conjugated system of double bonds and an oil soluble dye which initiates rapid polymerization of the binder when irradiated with cold energy